

AMENDMENT TO THE CLAIMS

Claims 1-31 (Canceled)

32. (Currently Amended) An inflation assembly effective for supplying a quantity of inflation gas to at least one associated inflatable restraint device, the inflation assembly comprising:

a first chamber containing supply of a first reactant material effective, upon reaction, to produce first reaction products at least including a quantity of gas and a quantity of heat;

a first initiator in reaction initiating discharge communication with at least a portion of the supply of the first reactant material contained within the first chamber, the first initiator effective upon actuation to initiate reaction of at least a portion of the supply of the first reactant material contained within the first chamber,

a diffuser chamber having a first end and a second end, the diffuser chamber in gas flow communication through the first end with the first chamber upon actuation of the first initiator, the diffuser chamber effective to discharge gas into the at least one associated inflatable restraint device,

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at least one gas treatment element at least in part disposed within the diffuser chamber, the at least one gas treatment element effective for treating gas being discharged into the at least one associated inflatable restraint device,

a second chamber having contents including a supply of dissociative gas source material comprising nitrous oxide, the second chamber closed in a static state with the nitrous oxide compressed therewithin, the second chamber openable upon actuation thereof whereby at least a portion of the second chamber contents including at least a portion of the nitrous oxide are in gas flow communication through the second end with the diffuser chamber and the at least one gas treatment element disposed therewithin, and

a chamber opener effective upon actuation of the inflation assembly to open the second chamber and to release at least a portion of the second chamber contents including at least a portion of the nitrous oxide into gas flow communication with the diffuser chamber and the at least one gas treatment element disposed therewithin, the chamber opener including a throttling orifice formed therein, wherein the at least a portion of the second chamber contents enter the diffuser chamber through the throttling orifice.

33. (Previously Presented) The inflation assembly of claim 32 wherein the first reactant material is a pyrotechnic material.

34. (Previously Presented) The inflation assembly of claim 32 wherein the second chamber additionally comprises at least one inert gas.

35. (Previously Presented) The inflation assembly of claim 32 wherein the at least one gas treatment element comprises a filter.

36. (Previously Presented) The inflation assembly of claim 32 wherein the chamber opener comprises a projectile.

37. (Previously Presented) The inflation assembly of claim 36 wherein the second chamber includes an opening closed in a static state by a rupturable seal and wherein the first reaction products at least in part propel the projectile into the rupturable seal to effect the rupture thereof.

38. (Previously Presented) A combination comprising the inflation assembly of claim 32 and at least one associated inflatable restraint device,

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wherein the at least one associated inflatable restraint device comprises an inflatable curtain restraint device.

39. (Previously Presented) The inflation assembly of claim 32 wherein the at least one gas treatment element is heated by contact with the first reaction products and wherein the portion of the second chamber contents released into gas flow communication with the diffuser chamber and the at least one gas treatment element contact the heated treatment element.

40. (Previously Presented) The inflation assembly of claim 39 wherein the nitrous oxide has a first molar content and wherein at least a portion of the nitrous oxide contacting the heated treatment element dissociates to form dissociation products having a second molar content, where the second molar content is greater than the first molar content.

41. (Previously Presented) The inflation assembly of claim 32 wherein the first chamber, the diffuser chamber and the second chamber are longitudinally aligned.

42. (Previously Presented) The inflation assembly of claim 32 wherein the first chamber and the second chamber are adjacently disposed side-by-side.

43. (Currently Amended) An inflation assembly effective for supplying a quantity of inflation gas to at least one associated inflatable restraint device, the inflation assembly comprising:

a first chamber containing supply of a first reactant material effective, upon reaction, to produce first reaction products at least including a quantity of gas and a quantity of heat;

a first initiator in reaction initiating discharge communication with at least a portion of the supply of the first reactant material contained within the first chamber, the first initiator effective upon actuation to initiate reaction of at least a portion of the supply of the first reactant material contained within the first chamber,

a diffuser chamber having a first end and a second end, the diffuser chamber in gas flow communication through the first end with the first chamber upon actuation of the first initiator, the diffuser chamber effective to discharge gas into the at least one associated inflatable restraint device,

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at least one gas treatment element at least in part disposed within the diffuser chamber, the at least one gas treatment element comprising a filter composed of a woven metal and effective for treating gas being discharged into the at least one associated inflatable restraint device,

a second chamber having contents including a supply of at least one gas source material, the second chamber closed in a static state with the supply of the at least one gas source material compressed therewithin, the second chamber openable upon actuation thereof whereby at least a portion of the second chamber contents are in gas flow communication through the second end with the diffuser chamber and the at least one gas treatment element disposed therewithin, and

a chamber opener effective upon actuation of the inflation assembly to open the second chamber and to release at least a portion of the second chamber contents into gas flow communication with the diffuser chamber and the at least one gas treatment element disposed therewithin;

wherein the at least one gas treatment element is heated by contact with the first reaction products and wherein the portion of the second chamber contents released into gas flow communication with the diffuser chamber and the at least one gas treatment element contact the heated treatment element and is heated thereby.

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44. (Previously Presented) The inflation assembly of claim 43 wherein the first reactant material is a pyrotechnic material.

45. (Previously Presented) The inflation assembly of claim 43 wherein the at least one gas source material comprises at least one inert gas.

46. (Previously Presented) The inflation assembly of claim 43 wherein the at least one gas source material comprises nitrous oxide.

47. (Previously Presented) The inflation assembly of claim 43 wherein the at least one gas source material comprises nitrous oxide and at least one inert gas.

48. (Canceled)

49. (Previously Presented) The inflation assembly of claim 43 wherein the chamber opener comprises a projectile.

50. (Previously Presented) The inflation assembly of claim 49 wherein the second chamber includes an opening closed in a static state by a rupturable seal and wherein the first reaction products at least in part propel the projectile into the rupturable seal to effect the rupture thereof.

51. (Previously Presented) A combination comprising the inflation assembly of claim 43 and at least one associated inflatable restraint device, wherein the at least one associated inflatable restraint device comprises an inflatable curtain restraint device.

52. (Previously Presented) The inflation assembly of claim 43 wherein the at least one gas source material has a first molar content and comprises nitrous oxide and wherein at least a portion of the nitrous oxide contacting the heated treatment element dissociates to form dissociation products having a second molar content, where the second molar content is greater than the first molar content.

53. (Previously Presented) The inflation assembly of claim 43 wherein the first chamber and the second chamber are adjacently disposed side-by-side.

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54. (Currently Amended) An assembly for supplying inflation gas to an inflatable restraint device, the assembly comprising:

a diffuser chamber having at least one discharge opening effective to discharge gas into the inflatable restraint device, the diffuser chamber having first and second ends with a pyrotechnic inflator device disposed at the first end and a stored gas chamber disposed at the second end,

the pyrotechnic inflator device including a first chamber containing supply of at least one pyrotechnic gas generant material effective, upon reaction, to produce first reaction products at least including a quantity of gas and a quantity of heat, the pyrotechnic inflator device also including an initiator in reaction initiating discharge communication with at least a portion of the supply of the at least one pyrotechnic gas generant material contained within the first chamber, the first initiator effective upon actuation to initiate reaction of at least a portion of the supply of the at least one pyrotechnic gas generant material contained within the first chamber,

the stored gas chamber, in a static state, having contents including a supply of at least one stored compressed gas,

at least one gas treatment element in spaced relation with the stored gas chamber and at least in part disposed within the diffuser chamber, the at least one gas

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treatment element effective for treating gas being discharged into the inflatable restraint device, and

a chamber opener at least in part disposed between the at least one gas treatment element and the stored gas chamber, ~~the chamber opener effective wherein~~ upon actuation of the inflation assembly, at least a portion of the first reaction products pass through the gas treatment element to contact and move the chamber opener to open the second chamber and to release at least a portion of the stored gas chamber contents into gas flow communication with the diffuser chamber and the at least one gas treatment element disposed therewithin.

55. (Previously Presented) The assembly of claim 54 wherein the at least one gas source material comprises at least one inert gas.

56. (Previously Presented) The assembly of claim 54 wherein the at least one gas source material comprises nitrous oxide.

57. (Previously Presented) The assembly of claim 54 wherein the at least one gas source material comprises nitrous oxide and at least one inert gas.

58. (Previously Presented) A combination comprising the assembly of claim 54 and at least one associated inflatable restraint device, wherein the at least one associated inflatable restraint device comprises an inflatable curtain restraint device.

59. (Previously Presented) The assembly of claim 54 wherein the at least one gas treatment element is heated by contact with the first reaction products and wherein the portion of the second chamber contents released into gas flow communication with the diffuser chamber and the at least one gas treatment element contact the heated treatment element.

60. (Previously Presented) The assembly of claim 59 wherein the at least one gas source material has a first molar content and comprises nitrous oxide and wherein at least a portion of the nitrous oxide contacting the heated treatment element dissociates to form dissociation products having a second molar content, where the second molar content is greater than the first molar content.

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61. (Previously Presented) The assembly of claim 54 wherein the first chamber, the diffuser chamber and the second chamber are longitudinally aligned.

62. (Previously Presented) The assembly of claim 54 wherein the first chamber and the second chamber are adjacently disposed side-by-side.